

### **REMARKS/ARGUMENTS**

This Amendment is submitted in reply to the Office Action dated July 25, 2006, and within the three-month period for reply extending to October 25, 2006.

Claims 1-22, 24, 34, and 52 are cancelled.

5        Claims 23 and 31 are amended.

Claims 23, 25-33, and 35-51 remain pending in the application after entry of this Amendment.

### **Response to Rejections Under 35 U.S.C. 102**

10        Claims 23-28, 31-38, 42-44, 47-49 were rejected under 35 U.S.C. 102(b) as being anticipated by Sandaiji et al. ("Sandaiji" hereafter) (U.S. Patent No. 4,982,065). These rejections are traversed.

      Sandaiji teaches an apparatus for performing a laser-induced etching process on a gapped bar material to form grooves or holes on a surface of the gapped bar. Specifically,  
15        Sandaiji teaches that the gapped bar is positioned in a phosphoric acid aqueous solution or an alkali metal hydroxide aqueous solution. Then, the gapped bar is irradiated by a laser beam having a predetermined power and a predetermined scanning speed. The laser beam induces an etching chemical reaction at the point of incidence with the gapped bar in the aqueous solution. As the laser beam is scanned over the gapped bar such that a  
20        precise track is etched within the gapped bar.

      Sandaiji's teachings with regard to the wavelength design of the laser source is limited to that disclosed at column 7, lines 58-65. Specifically, Sandaiji states the following:

      "As a laser source, various lasers can be employed. However, in view of the high  
25        absorption in a wavelength of 1 micron or less of ferrite and Sendust, preferably used is a laser source, such as a second harmonics of YAG laser or Ar ion laser, or

the like, which has an excellent oscillation stability and a small diverging angle of laser light."

Sandaiji does not teach that the laser source is designed to generate laser light capable of selectively heating a first material present on the surface of the gapped bar without causing a second material near the first material to be substantially heated by the laser light. Rather, Sandaiji is concerned with heating the gapped bar at the point of incidence of the laser light without regard to the particular material present on the gapped bar at the point of incidence of the laser light. Moreover, Sandaiji (column 5, lines 60-64) teaches that the gapped bar is made of a single material, e.g., ferrite, Sendust, or the like. Thus, the above-identified teachings of Sandaiji with regard to the wavelength of the laser light indicates that Sandaiji is concerned with optimal absorption of the laser light by the gapped bar without discrimination based on the particular material present on the gapped bar surface at the point of incidence of the laser light.

In view of the foregoing, with regard to amended claims 23 and 31, the Applicants submit that Sandaiji does not teach a radiant energy source designed to generate radiant energy having a wavelength range that is capable of selectively heating a first material present at a surface of the wafer upon which the radiant energy is incident without causing a second material near the first material to be substantially heated by the radiant energy. Thus, the laser source of Sandaiji does not teach the radiant energy source recited in each of claims 23 and 31.

Additionally, with regard to claim 31, Sandaiji does not a vessel defined by a top, a bottom, and an enclosing wall. Specifically, the container (2) of Sandaiji is disclosed as having a bottom and an enclosing wall, but not a top. The Office has not indicated how Sandaiji teaches the top feature of the vessel as recited in claim 31. Therefore, the Applicants also submit that Sandaiji does not teach the top feature of the vessel as recited in claim 31.

Based on the foregoing, Sandaiji does not teach each and every feature of amended claims 23 and 31, respectively. Therefore, each of claims 23 and 31 is not anticipated by Sandaiji under 35 U.S.C. 102. The Office is requested to withdraw the rejections of claims 23 and 31 under 35 U.S.C. 102.

5           With regard to claim 42, the Office has asserted that the sample holder (3) of Sandaiji (Figure 1) teaches a wafer holder configured to dip a wafer into the electroless plating solution to be contained within the tank and removed the wafer therefrom. However, this is simply not true. The teachings of Sandaiji with regard to the sample holder (3), as shown in Figure 1, are limited to those provided at column 8, lines 5-8.  
10       Specifically, Sandaiji teaches that "in a container 2 placed on an X-Y stage 1 there are arranged a sample holder 3 and a gapped bar 4 to be processed placed thereon." The Applicants submit that there is absolutely no teaching within Sandaiji that the sample holder (3) is configured to dip a wafer into and remove the wafer from an electroless plating solution to be contained within a tank. Thus, Sandaiji does not teach the wafer  
15       holder configured to dip a wafer into the electroless plating solution to be contained within the tank, and further configured to remove the wafer from the electroless plating solution to be contained within the tank, as recited in claim 42.

          Additionally, Sandaiji teaches that the gapped bar is exposed to the laser source by passing the laser light through quartz window 7 and etching solution 5. Sandaiji does not  
20       teach that the laser source is oriented to direct laser light toward the gapped bar upon removal of the gapped bar from the etching solution. Moreover, the quartz window 7 of Sandaiji would physically prevent the gapped bar from being removed from the etching solution in order to be exposed to the laser light. Therefore, the Applicants submit that Sandaiji does not teach the radiant energy source oriented to direct radiant energy toward  
25       the wafer upon removal of the wafer from the electroless plating solution to be contained within the tank, as recited in claim 42.

Based on the foregoing, Sandaiji does not teach each and every feature of claim 42. Therefore, claim 42 is not anticipated by Sandaiji under 35 U.S.C. 102. The Office is requested to withdraw the rejection of claim 42 under 35 U.S.C. 102.

With regard to claim 47, the Office has asserted that the sample holder (3) of Sandaiji (Figure 1) teaches a wafer holder configured to rotate a portion of a wafer through an electroless plating solution bath to be contained within a tank. However, this is simply not true. The teachings of Sandaiji with regard to the sample holder (3), as shown in Figure 1, are limited to those provided at column 8, lines 5-8. Specifically, Sandaiji teaches that "in a container 2 placed on an X-Y stage 1 there are arranged a sample holder 3 and a gapped bar 4 to be processed placed thereon." The Applicants submit that there is absolutely no teaching within Sandaiji that the sample holder (3) is configured to rotate a portion of a wafer through an electroless plating solution to be contained within a tank. Thus, Sandaiji does not teach a wafer holder configured to rotate a portion of the wafer through the electroless plating solution bath to be contained within the tank, as recited in claim 47.

Additionally, Sandaiji's teaches that the gapped bar is exposed to the laser source by passing the laser light through quartz window 7 and etching solution 5. Sandaiji does not teach that the laser source is oriented to direct laser light toward the gapped bar upon rotation of the gapped bar out of the etching solution. Moreover, the quartz window 7 of Sandaiji would physically prevent the gapped bar from being rotated out of the etching solution in order to be exposed to the laser light. Therefore, the Applicants submit that Sandaiji does not teach the radiant energy source oriented to direct radiant energy toward the portion of the wafer upon rotation out of the electroless plating solution bath to be contained within the tank, as recited in claim 47.

Based on the foregoing, Sandaiji does not teach each and every feature of claim 47. Therefore, claim 47 is not anticipated by Sandaiji under 35 U.S.C. 102. The Office is requested to withdraw the rejection of claim 47 under 35 U.S.C. 102.

Because each dependent claim includes each and every feature of its independent claim, each dependent claim is patentable for at least the same reasons provided for its independent claim. Therefore, the Applicant submits that each of dependent claims 25-28, 32-33, 35-38, 43-44, and 48-49 is patentable for at least the same reasons discussed above with regard to its independent claim. The Office is requested to withdraw the rejections of dependent claims 25-28, 32-33, 35-38, 43-44, and 48-49.

In considering the Applicants arguments above with regard to the rejections under 35 U.S.C. 102, the Office is requested to consider the substantial body of case law that has well-established that the standard for lack of novelty (i.e., "anticipation") under 35 U.S.C. 102 is one of strict identity. To anticipate a claim for a patent, a single prior source must contain all its essential elements. *See, e.g., Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 U.S.P.Q. 81, 90 (Fed. Cir. 1986). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

### **Response to Rejections Under 35 U.S.C. 103**

Claims 29-30, 33, 39-41, 45-46, 50-51 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sandaiji in view of Mayer et al. ("Mayer" hereafter) (U.S. Patent No. 6,713,122). These rejections are traversed.

Because each dependent claim includes each and every feature of its independent claim, each dependent claim is patentable for at least the same reasons provided for its independent claim. Therefore, the Applicant submits that each of dependent claims 29-30, 33, 39-41, 45-46, 50-51 is patentable for at least the same reasons discussed above with regard to its independent claim. The Office is requested to withdraw the rejections of dependent claims 29-30, 33, 39-41, 45-46, 50-51.

**Response to Non-Statutory Double Patenting Rejection**


Claims 23-51 were rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-9, 21-27 of U.S. Patent Application No. 10/734,704. These rejections are traversed.

The Office asserts that although the conflicting claims are not identical, they are not patentably distinct from each other because both teaches a tank, a wafer support structure disposed within the tank, and a radiant energy source disposed above the wafer support structure. The Office has not indicated that the non-statutory double patenting rejection is provisional. However, because U.S. Patent Application No. 10/734,704, is pending at this time, the Office should have identified the asserted non-statutory obviousness-type double patenting rejection as a PROVISIONAL rejection.

Because the non-statutory obviousness-type double patenting must be provisional, and because the claims pending in U.S. Patent Application No. 10/734,704, and the present application are subject to further change prior to issuance, it is neither necessary nor appropriate for the Applicants to argue against the propriety of the rejection at this time. In the event that U.S. Patent Application No. 10/734,704, issues prior to the present application, and the provisional non-statutory obviousness-type double patenting rejection is made non-provisional, the Applicants will address the propriety of the rejection with regard to the claims that issue forth from U.S. Patent Application No. 10/734,704.

The Applicants respectfully submit that all of the pending claims are in condition for allowance. Therefore, a Notice of Allowance is requested. If the Examiner has any questions concerning the present Amendment, the Examiner is kindly requested to contact the undersigned at (408) 774-6914. Also, if any additional fees are due in connection with filing this Amendment, the Commissioner is authorized to charge Deposit Account No. 50-0805 (Order No. LAM2P458). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,  
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